



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/760,406	01/21/2004	Shmuel Melamed	2232/11	1292

7590 02/04/2008
DR. MARK FRIEDMAN LTD.
C/o Bill Polkinghorn
Discovery Dispatch
9003 Florin Way
Upper Marlboro, MD 20772

EXAMINER

WON, MICHAEL YOUNG

ART UNIT	PAPER NUMBER
----------	--------------

2155

MAIL DATE	DELIVERY MODE
-----------	---------------

02/04/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

**Advisory Action
Before the Filing of an Appeal Brief**

Application No.

11/098,707

Applicant(s)

STEWART, GUY A.

Examiner

Alan M. Otto

Art Unit

2187

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED 15 January 2008 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE.

1. ☒ The reply was filed after a final rejection, but prior to or on the same day as filing a Notice of Appeal. To avoid abandonment of this application, applicant must timely file one of the following replies: (1) an amendment, affidavit, or other evidence, which places the application in condition for allowance; (2) a Notice of Appeal (with appeal fee) in compliance with 37 CFR 41.31; or (3) a Request for Continued Examination (RCE) in compliance with 37 CFR 1.114. The reply must be filed within one of the following time periods:

- a) ☐ The period for reply expires _____ months from the mailing date of the final rejection.
b) ☒ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.

Examiner Note: If box 1 is checked, check either box (a) or (b). ONLY CHECK BOX (b) WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

NOTICE OF APPEAL

2. ☐ The Notice of Appeal was filed on _____. A brief in compliance with 37 CFR 41.37 must be filed within two months of the date of filing the Notice of Appeal (37 CFR 41.37(a)), or any extension thereof (37 CFR 41.37(e)), to avoid dismissal of the appeal. Since a Notice of Appeal has been filed, any reply must be filed within the time period set forth in 37 CFR 41.37(a).

AMENDMENTS

3. ☐ The proposed amendment(s) filed after a final rejection, but prior to the date of filing a brief, will not be entered because
(a) ☐ They raise new issues that would require further consideration and/or search (see NOTE below);
(b) ☐ They raise the issue of new matter (see NOTE below);
(c) ☐ They are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
(d) ☐ They present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: _____. (See 37 CFR 1.116 and 41.33(a)).

4. ☐ The amendments are not in compliance with 37 CFR 1.121. See attached Notice of Non-Compliant Amendment (PTOL-324).
5. ☐ Applicant's reply has overcome the following rejection(s): _____.
6. ☐ Newly proposed or amended claim(s) _____ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).
7. ☒ For purposes of appeal, the proposed amendment(s): a) ☐ will not be entered, or b) ☒ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.
The status of the claim(s) is (or will be) as follows:
Claim(s) allowed: _____.
Claim(s) objected to: _____.
Claim(s) rejected: 1-28.
Claim(s) withdrawn from consideration: _____.

AFFIDAVIT OR OTHER EVIDENCE

8. ☐ The affidavit or other evidence filed after a final action, but before or on the date of filing a Notice of Appeal will not be entered because applicant failed to provide a showing of good and sufficient reasons why the affidavit or other evidence is necessary and was not earlier presented. See 37 CFR 1.116(e).
9. ☐ The affidavit or other evidence filed after the date of filing a Notice of Appeal, but prior to the date of filing a brief, will not be entered because the affidavit or other evidence failed to overcome all rejections under appeal and/or appellant fails to provide a showing of good and sufficient reasons why it is necessary and was not earlier presented. See 37 CFR 41.33(d)(1).
10. ☐ The affidavit or other evidence is entered. An explanation of the status of the claims after entry is below or attached.

REQUEST FOR RECONSIDERATION/OTHER

11. ☒ The request for reconsideration has been considered but does NOT place the application in condition for allowance because: see attached.
12. ☐ Note the attached Information Disclosure Statement(s). (PTO/SB/08) Paper No(s). _____.
13. ☐ Other: _____.

Advisory Action

Response to Amendment

1. Examiner acknowledges receipt of the amendment dated 1/15/2008. Claims 1-28 are now pending in the application.

Response to Arguments

2. Applicant's arguments filed 1/15/2008 have been fully considered but they are not persuasive.
3. Applicant argues with respect to claim 1 that Aasheim et al. do not teach a storage media interface operable to re-write old data by writing new data directly to the at least one non-volatile memory device, where the storage media interface is operable to write the new data to any one or more non-contiguous available subunits of any given one of one or more specified erasable-units. Applicant first argues that writing to any one or more non-contiguous available subunits implies that an order cannot be followed when writing. However, although Aasheim et al. follows a set order when writing, writing to any subunit does not mean having to write to each and every specific subunit combination in a particular order. Instead, writing to one non-contiguous available subunit would satisfy the clause. Second, Aasheim et al. writes to a next available free sector (**see para. 87, where the next available free sector is chosen for writing**). This does not necessarily mean the next physical sector. This is further explained in para. 93 where the sector counter is advanced one valid sector, but not necessarily

contiguous. Although fig. 14 does not display this specific step, it is clear from para. 87 and 93 that the next available free sectors are chosen for writing, and would not necessarily be contiguous. Thirdly, applicant points to fig. 6a and 6b to show that physical sectors are written in order. However, those contiguous physical sectors are mapped to different non-contiguous logical sectors. An example of writing to contiguous logical sectors is given in para. 82, lines 1-3 where a write is requested for logical sector addresses 50-79. This combined with fig. 6a and 6b highlight that writes do not always occur on contiguous physical sectors. Further, as acknowledged by applicant, Aasheim et al. can skip an entire block if a block is bad. Therefore, when writing to a first sector after skipping a block, that sector would constitute one non-contiguous available subunit. Finally, claim 1 uses the phrasing "operable to write" when describing a possible write operation. Aasheim et al. is operable to write to two non-contiguous sectors (see para. 56, describing how logical sector mapping allows data to be flexibly assigned to any physical location on the flash memory medium).

4. Applicant next argues with regards to claim 24 that Aasheim et al. does not teach tracking respective specified characteristics corresponding to the at least one specified logical erasable-unit and to the respective physical erasable-unit, wherein the respective specified characteristics comprise information indicating whether the data associated with the respective specified subunits has been replaced, and whether the respective candidate subunits have been written. Examiner agrees with applicant that Aasheim et al. is marking a sector "dirty" instead of a block. The claim language specified "tracking specified characteristics corresponding to the at least one specified

logical erasable-unit." Although Aasheim et al. teach marking sectors dirty, those sectors are associated or correspond to blocks in which they reside, even if the actual blocks are not marked. Applicant quotes from para. 75 of Aasheim et al. to attempt to show that sectors are not tied to blocks. However, the method of writing sectors is explained in more detail in fig. 14, which clearly shows that the number of sectors in a specific block is tracked, and the sectors are tied to a block. This is further shown in para. 102, where the compactor goes through and frees blocks, although the specific sectors are marked dirty. Aasheim et al. teaches marking a sector dirty, where that sector is clearly associated or corresponds to a particular block. As part of a flash memory structure, blocks are made up of sectors. Also see para. 101, where in order to clear a sector a block is erased. Therefore, marking a sector dirty will have the effect of associating those characteristics with the appropriate block. In addition, examiner points out that the information tracked in Aasheim et al. is whether data in a subunit has been replaced. This exact same information (tracking sectors instead of blocks) is claimed in claim 24. Tracking sector information would correspond to a block in which the sector resides.

CLOSING COMMENTS

Conclusion

a. STATUS OF CLAIMS IN THE APPLICATION

5. The following is a summary of the treatment and status of all claims in the application as recommended by **M.P.E.P. 707.07(i)**:

a(1) CLAIMS REJECTED IN THE APPLICATION

6. Per the instant office action, claims 1-28 stand rejected.

b. DIRECTION OF FUTURE CORRESPONDENCES

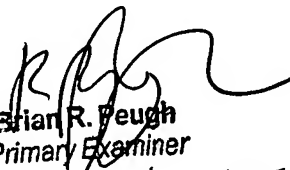
7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alan Otto whose telephone number is 571-270-1626. The examiner can normally be reached on 8:00-5:30 M-F.

IMPORTANT NOTE

8. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Donald Sparks can be reached on 571-272-4201. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.
9. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

AO

AO


Brian R. Peugh
Primary Examiner
1/30/08